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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/551,143	04/14/2000	Hideaki Yoshida	000489	1917
23850	7590	10/24/2003	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP			JERABEK, KELLY L	
1725 K STREET, NW			ART UNIT	PAPER NUMBER
SUITE 1000				
WASHINGTON, DC 20006			2612	
DATE MAILED: 10/24/2003 <i>3</i>				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/551,143	YOSHIDA ET AL.
	Examiner Kelly L. Jerabek	Art Unit 2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-32 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 14 April 2000 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) Interview Summary (PTO-413) Paper No(s) _____.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 8-16, and 21-25 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada et al. US 6,577,341 in view of Kanematsu et al. US 5,852,454.

Claim 1 recites "A color image pickup device comprising: a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements; and a color coding array corresponding to the pixel group, arranged in a randomized array" reads on Yamada (fig.69; col. 1, lines 66-67; col. 2, lines 1-7) except for the mention of a randomized array as claimed. However, a randomized array reads on Kanematsu (fig. 10; col. 11, lines 5-34).

Therefore, taking the combined teaching of Yamada and Kanematsu as a whole, it would have been obvious to modify Yamada to include a randomized array as taught in Kanematsu. Doing so would provide a method for randomly arranging pixel groups from a color image pickup device into an array.

Claim 2, see claim 1. A color filter is mentioned in Yamada (fig. 69, 16).

Claim 3 recites "A color image pickup apparatus comprising: a color image pickup device having a pixel group placed in an array of a plurality of pixels of photoelectric conversion elements and a color coding array corresponding to the pixel group, arranged in a randomized array; and color separation means for performing color separation processing of output signals of the color image pickup device in accordance with the random color coding array of the color image pickup device" reads on Yamada (fig.69; col. 1, lines 66-67; col. 2, lines 1-7; col. 4, lines 58-67) except for the mention of a randomized array as claimed. However, a randomized array reads on Kanematsu (fig. 10; col. 11, lines 5-34).

Therefore, taking the combined teaching of Yamada and Kanematsu as a whole, it would have been obvious to modify Yamada to include a randomized array as taught in Kanematsu. Doing so would provide a method for randomly arranging pixel groups from a color image pickup apparatus into an array.

Claim 4, see claim 3. A color filter is mentioned in Yamada (fig. 69, 16).

Claim 5, see claim 3. Storage means for storing array data as claimed is disclosed in Yamada (col. 25, lines 31-35; fig. 1, 42).

Claim 8, see claim 1. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 9, see claim 2. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 10, see claim 1. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 11, see claim 3. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 12, see claim 4. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 13, see claim 3. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 14, see claim 4. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 15, see claim 5. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 16, see claim 5. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 21, see claim 1. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 22, see claim 2. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 23, see claim 3. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 24, see claim 4. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 25, see claim 5. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claims 6,17,18, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Kanematsu and further in view of Iura et al. US 6,157,406.

Claim 6 recites reads on Yamada in view of Kanematsu as applied to claim 5 except for the mention of the storage means comprising mask ROM as claimed. However, storing data using ROM reads on Iura (col. 20, lines 1-7).

Therefore, taking the combined teaching of Yamada, Kanematsu, and Iura as a whole, it would have been obvious to modify Yamada and Kanematsu to include ROM as storage means as taught in Iura. Doing so would provide a method for effectively storing array data concerning the random color-coding array.

Claim 17, see claim 6. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 18, see claim 6. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 26, see claim 6. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claims 7,19,20, and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Kanematsu and further in view of Mogi US 6,115,064.

Claim 7 recites "The color image pickup apparatus according to claim 5, wherein said storage means comprises EEPROM" reads on Yamada in view of Kanematsu as applied to claim 5 except for the mention of the storage means comprising EEPROM as claimed. However, storing data using EEPROM reads on Mogi (col. 2, lines 66-67).

Therefore, taking the combined teaching of Yamada, Kanematsu, and Mogi as a whole, it would have been obvious to modify Yamada and Kanematsu to include EEPROM as storage means as taught in Mogi. Doing so would provide a method for effectively storing array data concerning the random color-coding array.

Claim 19, see claim 7. The predetermined array restricting conditions as claimed are disclosed in Kanematsu (col. 11, lines 16-23).

Claim 20, see claim 7. The minimum density conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claim 27, see claim 7. The color distributing conditions of the array as claimed are disclosed in Kanematsu (col. 11, lines 13-15).

Claims 28, 29, and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Kanematsu, and Rambaldi US 6,618,084.

Claim 28 includes all of the limitations of claim 5 as taught in Yamada and Kanematsu. However, Yamada and Kanematsu fail to teach "storage means for storing array data concerning the color coding array and pixel defect data of the color image pickup device; and color separation means for generating color signals in accordance with the color coding array data stored in the storage means, wherein said color separation means performing a predetermined pixel defect correction in the color signal generating process based on the pixel defect data stored in said storage means", as claimed. However, pixel defect correction is well known and used in the art as evidenced in Rambaldi (col. 11, lines 15-31).

Therefore, taking the combined teachings of Yamada, Kanematsu, and Rambaldi as a whole, it would have been obvious to modify the teachings of Yamada and Kanematsu to include pixel defect correction as taught in Rambaldi. Doing so would provide a method for performing pixel defect correction based on the pixel defect data stored in the storage means.

Claim 29, see claim 28.

Claim 30, see claim 28.

Claims 31, and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada in view of Kanematsu, in view of Rambaldi, and further in view of Mogi.

Re claim 31 Yamada, Kanematsu, and Rambaldi as applied to claim 28 fail to teach "wherein said storage means comprises EEPROM", as claimed. However, storing data using EEPROM reads on Mogi (col. 2, lines 66-67).

Therefore, taking the combined teaching of Yamada, Kanematsu, Rambaldi, and Mogi as a whole, it would have been obvious to modify Yamada, Kanematsu, and Rambaldi to include EEPROM as storage means as taught in Mogi. Doing so would provide a method for performing pixel defect correction based on the pixel defect data stored in the storage means.

Claim 32, see claim 31.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Kelly Jerabek whose telephone number is (703) 305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached at (703)-305-4929.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

The fax number for submitting all Official communications is (703) 872-9306.

The fax number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at (703) 746-3059.

KLJ


VULE
PRIMARY EXAMINER